

REMARKS

Claims 1-56 are pending in the instant application. In the outstanding office action, the examiner rejects claims 1, 12, 13, 17-19, 27-30, 34-39, 40-42, and 50 as being anticipated, rejects claims 20 and 43-49 as being obvious, and indicates that claims 2-11, 14-16, 21-26, 31-33, and 55 are allowable. Applicant appreciates the indication of allowable subject matter but, after careful study of the references on which the examiner's rejections are based, believes that all claims stand in condition for allowance.

First, the examiner bases all anticipation rejections on Chung (U.S. 2002/0151310). As a matter of law, an anticipation rejection fails unless the reference teaches, in an identical arrangement, every limitation of the claim at issue. All independent claims in the instant application—claims 1, 27, 35, 50, and 53—are rejected as being anticipated by Chung, yet Chung plainly fails to teach the limitations of these claims.

In more detail, the examiner argues that Chung anticipates independent claim 1. Claim 1 includes the following text:

A method of reverse link flow control for a sector in a high rate packet data network serving a plurality of access terminals, said method comprising:

- (1) determining an individual interference contribution of each access terminal served by said sector based on a reverse data channel rate of said access terminal;
- (2) estimating total sector interference for said sector based on said individual interference contributions of said access terminals; and
- (3) setting a reverse link flow control indicator regulating the reverse data channel rates used by said access terminals based on said total sector interference.

(Enumeration of claim elements added for discussion.)

In particular, the examiner argues that paragraph [0060] of Chung teaches the limitations of element (1) of claim 1. That assertion is wrong and the plain language of Chung contradicts the examiner's argument. Paragraph [0060] of Chung explicitly teaches calculating the signal-to-noise ratio (SNR) for the *i*th mobile station (MS) in a given sector. Chung carefully explains—see paragraphs [0061] through [0063]—that the calculation is used to determine the reverse link

rate, r_i , that can be supported by that i th MS. Thus, paragraph [0060], nor any other paragraph of Chung describes “determining an individual interference contribution of each access terminal served by said sector based on a reverse data channel rate of said access terminal.” Chung fails to anticipate claim 1 for this reason alone.

Further, the examiner asserts that paragraphs [0049] and [0060] of Chung teach the limitations of element (2) of claim 1. First, as discussed above, Chung does not determine the individual interference contributions of access terminals relative to the sector serving them, as stipulated by the limitations of element (1) of claim 1. As such, Chung necessarily cannot determine a total sector interference based on these individual interferences. More particularly, paragraph [0060] says nothing about total interference, while paragraph [0049] simply states “if there are N MS’s in a cell, then the in-cell interference comes from $N-1$ of the MS’s.” This teaching simply states that in-cell interference relative to a mobile station in Chung comes from the other in-cell access terminals. That teaching is consistent with Chung’s emphasis on determining per mobile station reverse link rates based on the signal conditions seen by each mobile station—see paragraphs [0060] through [0063]—but it has nothing to do with “estimating total sector interference for said sector based on said individual interference contributions of said access terminals.” Chung fails to anticipate claim 1 for this reason alone.

Lastly, the examiner asserts that the DRC value discussed in paragraph [0011] and element 44 of Figure 5 teach the limitations of element (3) of claim 1. That is, the examiner asserts that these teachings in Chung correspond to reverse link flow control within the meaning of claim 1. However, this assertion contradicts the plain teachings of Chung. First, DRCs as plainly described by Chung are data rate control values sent by individual MSs to control the forward link data rates used to send data from the network (base station) to the individual MSs. More particularly, in Chung, each MS measures forward link SIR—see paragraphs [0012] and [0112] in Chung—and uses that measurement to calculate the data rate that can be supported for sending data to the MS on the forward link. In other words, the DRC is a mobile-specific

value calculated by individual MSs based on the forward link SIRs measured by the individual MSs and, as such, the DRC described by Chung has nothing to do with the total reverse link sector interference, and therefore, is completely unrelated to the claimed reverse link flow control indicator set by the base station. For this reason alone, Chung fails to anticipate claim 1.

The applicant notes that Chung does teach calculating a reverse link rate for a specific MS based on the DRC value received from that MS, and sending the reverse link rate to the MS. However, this teaching also differs from the limitations of element (3) of claim 1. In particular, the reverse link rate control described by Chung is specific per MS, and is calculated on a per-mobile basis using DRCs received from particular MSs. Therefore, these teachings of Chung cannot be argued as anticipating “setting a reverse link flow control indicator regulating the reverse data channel rates used by said access terminals based on said total sector interference.” In other words, Chung plainly does not teach regulating the reverse link data rates of potentially many access terminals in a serving sector based on estimating the total (reverse link) interference caused by those terminals in that sector. Simply put, Chung cannot under any stretch of logic be argued as anticipating claim 1.

For at least the above reasons, Chung does not anticipate independent claim 1 or dependent claims 2 – 26. Independent claim 50 claims an apparatus corresponding to the method of independent claim 1. Therefore, for substantially the same reasons provided above, Chung also does not anticipate independent claim 50 and dependent claims 51 – 52. The applicant respectfully requests reconsideration.

Independent claims 27 and 35 claim a method of controlling the reverse link flow in a plurality of sectors in a wireless network comprising regulating the reverse link data rates for access terminals in a first sector based on the sector loading of a second sector. In so doing, the invention of claim 27 reduces reverse link interference in the second sector caused by the access terminals in the first sector. The examiner asserts that paragraph [0060] in Chung

describes this claim. In particular, the examiner asserts that the factors $g_j^2 P_j (1 + \alpha_{R_j})$ described in paragraph [0060] teach that the reverse link data rate of the i^{th} access terminal depends on the j^{th} access terminal. With all due respect, the examiner's assertion has nothing to do with the claim language. The cited section simply describes the other-mobile interference that bears on the calculation of signal-to-noise ratio at a given mobile station.

Further, the examiner ignores the claim limitation that the reverse link rates (plural) of access terminals in one sector are regulated based on the loading in another sector. At most, Chung teaches controlling the particular reverse link rates of individual mobile stations in one sector based on an estimate of the interference caused by each such mobile station in another sector—see, e.g., claims 1 and 26 of Chung. Nowhere does Chung teach or suggest using the reverse link loading in one sector to collectively regulate the reverse link rates of a plurality of access terminals in another sector. For this reason alone, Chung cannot anticipate claims 27 and 35.

Because the remaining independent claims have the same or similar limitations as discussed above, and because the examiner's mischaracterizations of Chung's teachings are pervasive throughout all anticipation arguments advanced in the office action, Applicant believes that Chung cannot, with any legal or technical merit, be argued as anticipating any of the independent claims 1, 27, 35, and 50, or the corresponding dependent claims 2 – 26, 28 – 34, 36 – 49, and 51 – 52. As such, the applicant respectfully requests that the anticipation rejections of these claims be withdrawn.

Independent claim 53 is an apparatus claim that generally corresponds to the methods of claims 27 and 35, so the above rebuttal arguments apply with equal force to claim 53. However, the examiner's rejection of independent claim 53 is unclear. While the examiner does not list claim 53 as part of the claim set anticipated by Chung, it appears that the examiner does reject independent claim 53 as being anticipated by Chung (page 5 of the pending office action).

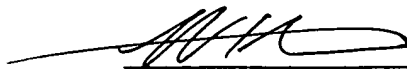
Further, the examiner explicitly rejects independent claim 53 under 35 U.S.C. §103 as being obvious over Chheda (U.S. Patent No. 6,188,914) in view of Chung. In any event, Chung does not anticipate claim 53 for at least the reasons stated above with respect to claims 27 and 35. Further, the §103 rejection is invalid because, contrary to the examiner's assertions, Chung does not teach or suggest computing a flow control parameter for a base station, where the flow control parameter is dependent on sector loading estimate for at least one other base station (see above remarks). The examiner concedes that Chheda does not teach this limitation. Therefore, the combination of Chheda and Chung does not teach the limitations of independent claim 53. As such, independent claim 53 and dependent claims 54 – 56 are patentably distinct over the cited art.

In addition to the anticipation and obviousness rejections, the examiner also noted that the demodulator on page 13 of the instant application was paired with the wrong reference number. The applicant amends this paragraph, as well as a couple of other paragraphs, to correct the reference number errors in the specification. No new matter is added.

In light of the above remarks, the applicant requests that the examiner reconsider all rejections and allow the application to move forward to allowance. Should any issues remain unresolved, the applicant requests that the examiner call the undersigned.

Respectfully submitted,

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